

May 03, 2007

Bill Haldeman PES Environmental 9 Lake Bellevue Dr Ste 108 Bellevue, WA/USA 98005

RE: Shell Terminal - 2555 13th SW, Seattle, WA

Enclosed are the results of analyses for samples received by the laboratory on 04/14/07 11:10. The following list is a summary of the Work Orders contained in this report, generated on 05/03/07 15:54.

If you have any questions concerning this report, please feel free to contact me.

Work Order	<u>Project</u>	<u>ProjectNumber</u>
BQD0232	Shell Terminal - 2555 13th SW	SAP 357032, RIPR 57904

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outfall-1-041307	BQD0232-01	Water	04/13/07 17:30	04/14/07 11:10
Outfall-2-041307	BQD0232-02	Water	04/13/07 19:50	04/14/07 11:10
Field Blank	BQD0232-03	Water	04/13/07 17:30	04/14/07 11:10
Trip Blank	BQD0232-04	Water	04/13/07 17:30	04/14/07 11:10

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Sandra Yakamavich, Project Manager







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Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

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Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01	(Outfall-1-041307)		Wa	ter		Sampl	led: 04/1	3/07 17:30			
Gasoline Range Hy	/drocarbons	NWTPH-Gx/802 1B	ND		50.0	ug/l	1x	7D16025	04/16/07 10:45	04/16/07 14:35	
Benzene		"	ND		0.500	"	"	"	"	"	
Toluene		"	ND		0.500	"	"	"	"	"	
Ethylbenzene		"	ND		0.500	"	"	"	"	"	
Xylenes (total)		"	ND		1.00	"	"	"	"	"	
Surrogate(s):	4-BFB (FID)			84.3%		58 - 144 %	"			"	
	4-BFB (PID)			102%		68 - 140 %	"			"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

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PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Total Metals by EPA 200 Series Methods

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01	(Outfall-1-041307)		Water			Sampled: 04/13/07 17:30					
Arsenic		EPA 200.7	ND		0.100	mg/l	1x	7D20047	04/20/07 16:30	04/25/07 10:32	
Cadmium		"	ND		0.00500	"	"	"	"	04/24/07 17:58	
Copper		"	ND		0.0100	"	"	"	"	"	
Lead		"	ND		0.0500	"	"	"	"	"	
Nickel		"	ND		0.0100	"	"	"	"	"	
Silver		"	ND		0.0100	"	"	"	"	"	
Zinc		"	0.0544		0.0200	"	"	"	"	"	

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Sandra Yakamavich, Project Manager

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BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



Shell Terminal - 2555 13th SW, Seattle, WA **PES Environmental** Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: 05/03/07 15:54 Bellevue, WA/USA 98005 Project Manager: Bill Haldeman

Organochlorine Pesticides and PCBs by EPA Method 608

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01 (Outfall-1-041307)		Wa	iter		Sampl	ed: 04/1	13/07 17:30			Н4
Aldrin	EPA 608	ND		0.0990	ug/l	1x	7D23012	04/23/07 08:52	04/26/07 20:48	
alpha-BHC	"	ND		0.0396	"	"	"	"	"	
beta-BHC	"	ND		0.0792	"	"	"	"	"	
delta-BHC	"	ND		0.0990	"	"	"	"	"	
gamma-BHC (Lindane)	"	ND		0.0396	"	"	"	"	"	
alpha-Chlordane	"	ND		0.0396	"	"	"	"	"	
gamma-Chlordane	"	ND		0.0396	"	"	"	"	"	
4,4′-DDD	"	ND		0.0792	"	"	"	"	"	
4,4′-DDE	"	ND		0.0792	"	"	"	"	"	
4,4'-DDT	"	ND		0.0792	"	"	"	"	"	
Dieldrin	"	ND		0.0792	"	"	"	"	"	
Endosulfan I	"	ND		0.0198	"	"	"	"	"	
Endosulfan II	"	ND		0.0792	"	"	"	"	"	
Endosulfan sulfate	"	ND		0.0990	"	"	"	"	"	
Endrin	"	ND		0.0792	"	"	"	"	"	
Endrin aldehyde	"	ND		0.198	"	"	"	"	"	
Endrin ketone	"	ND		0.198	"	"	"	"	"	
Heptachlor	"	ND		0.0792	"	"	"	"	"	
Heptachlor epoxide	"	ND		0.0396	"	"	"	"	"	
Methoxychlor	"	ND		0.495	"	"	"	"	"	
Toxaphene	"	ND		1.98	"	"	"	"	"	
Aroclor 1016	"	ND		0.495	"	"	"	"	"	
Aroclor 1221	"	ND		0.495	"	"	"	"	"	
Aroclor 1232	"	ND		0.495	"	"	"	"	"	
Aroclor 1242	"	ND		0.495	"	"	"	"	"	
Aroclor 1248	"	ND		0.495	"	"	"	"	"	
Aroclor 1254	"	ND		0.495	"	"	"	"	"	
Aroclor 1260	"	ND		0.495	"	"	"	"	#	
Surrogate(s): TCX		<u> </u>	75.8%	<u> </u>	25 - 129 %	"		<u> </u>	"	
Decachlorobiphenyl			37.0%		22 - 125 %	"			"	

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Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Purgeables by EPA Method 624

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01 (Outfall-1-041307)		Wa	ter		Sam	pled: 04/1	3/07 17:30			
Acetone	EPA 624	ND		10.0	ug/l	1x	7D24029	04/24/07 12:19	04/24/07 14:33	
Acetonitrile	"	ND		5.00	"	"	"	"	"	
Acrolein	"	ND		5.00	"	"	"	"	"	
Acrylonitrile	"	ND		5.00	"	"	"	"	"	
Benzene	"	ND		1.00	"	"	"	"	"	
Bromodichloromethane	"	ND		1.00	"	"	"	"	"	
Bromoform	"	ND		1.00	"	"	"	"	"	
Bromomethane	"	ND		2.00	"	"	"	"	"	
2-Butanone	"	ND		10.0	"	"	"	"	"	
Carbon disulfide	"	ND		1.00	"	"	"	"	"	
Carbon tetrachloride	"	ND		1.00	"	"	"	"	"	
Chlorobenzene	"	ND		1.00	"	"	"	"	"	
Chloroethane	"	ND		1.00	"	"	"	"	"	
2-Chloroethylvinyl ether	"	ND		5.00	"	"	"	"	"	
Chloroform	"	ND		1.00	"	"	"	"	"	
Chloromethane	"	ND		5.00	"	"	"	"	"	
Dibromochloromethane	"	ND		1.00	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND		5.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND		1.00	"	"	"	"	"	
Dibromomethane	"	ND		1.00	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND		1.00	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND		1.00	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND		1.00	"	"	"	"	"	
Dichlorodifluoromethane	"	ND		1.00	"	"	"	"	"	
1,1-Dichloroethane	"	ND		1.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND		1.00	"	"	"	"	"	
1,1-Dichloroethene	"	ND		1.00	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND		1.00	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND		1.00	"	"	"	"	"	
1,2-Dichloropropane	"	ND		1.00	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND		1.00	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND		1.00	"	"	"	"	"	
Ethylbenzene	"	ND		1.00	"	"	"	"	"	
2-Hexanone	"	ND		10.0	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND		10.0	"	"	"	"	"	
Methylene chloride	"	ND		5.00	"	"	"	"	"	
Styrene	"	ND		1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND		1.00	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND		1.00	"	"	"	"	"	
Tetrachloroethene	"	ND		1.00	"	"	"	"	"	
Toluene	"	ND		1.00	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND		1.00	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND		1.00	"	"	"	"	"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Purgeables by EPA Method 624

TestAmerica - Seattle, WA

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01	(Outfall-1-041307)		W	ater		Sampl	ed: 04/1	13/07 17:30			
Trichloroethene		EPA 624	ND		1.00	ug/l	1x	7D24029	04/24/07 12:19	04/24/07 14:33	
Trichlorofluorome	thane	"	ND		1.00	"	"	"	"	"	
1,2,3-Trichloropro	pane	"	ND		1.00	"	"	"	"	"	
Vinyl acetate		"	ND		5.00	"	"	"	"	"	
Vinyl chloride		"	ND		1.00	"	"	"	"	"	
o-Xylene		"	ND		1.00	"	"	"	"	"	
n,p-Xylene		"	ND		2.00	"	"	"	"	"	
Surrogate(s):	1,2-DCA-d4			98.0%		70 - 130 %	"			"	
	Toluene-d8			101%		70 - 130 %	"			"	
	4-BFB			100%		70 - 130 %	"			"	
BQD0232-04	(Trip Blank)		W	ater		Sampl	ed: 04/1	13/07 17:30			
Acetone		EPA 624	ND		10.0	ug/l	1x	7D24029	04/24/07 12:19	04/24/07 14:50	
Acetonitrile		"	ND		5.00	"	"	"	"	"	
Acrolein		"	ND		5.00	"	"	"	"	"	
Acrylonitrile		"	ND		5.00	"	"	"	"	"	
Benzene		"	ND		1.00	"	"	"	"	"	
Bromodichloromet	thane	"	ND		1.00	"	"	"	"	"	
Bromoform		"	ND		1.00	"	"	"	"	"	
Bromomethane		"	ND		2.00	"	"	"	"	"	
-Butanone		"	ND		10.0	"	"	"	"	"	
Carbon disulfide		"	ND		1.00	"	"	"	"	"	
Carbon tetrachlorio	de	"	ND		1.00	"	"	"	"	"	
Chlorobenzene		"	ND		1.00	"	"	"	"	"	
Chloroethane		"	ND		1.00	"	"	"	"	"	
2-Chloroethylviny	l ether	"	ND		5.00	"	"	"	"	"	
Chloroform		"	ND		1.00	"	"	"	"	"	
Chloromethane		"	ND		5.00	"	"	"	"	"	
Dibromochlorome	thane	"	ND		1.00	"	"	"	"	"	
,2-Dibromo-3-chl	loropropane	"	ND		5.00	"	"	"	"	"	
,2-Dibromoethan	e	"	ND		1.00	"	"	"	"	"	
Dibromomethane		"	ND		1.00	"	"	"	"	"	
,2-Dichlorobenze	ne	"	ND		1.00	"	"	"	"	"	
,3-Dichlorobenze	ne	"	ND		1.00	"	"	"	"	"	
,4-Dichlorobenze	ne	"	ND		1.00	"	"	"	"	"	
Dichlorodifluorom	nethane	"	ND		1.00	"	"	"	"	"	
1,1-Dichloroethane	e	"	ND		1.00	"	"	"	"	"	
,2-Dichloroethane		"	ND		1.00	"	"	"	"	"	
,1-Dichloroethene	e	"	ND		1.00	"	"	"	"	"	
is-1,2-Dichloroetl		"	ND		1.00	"	"	"	"	"	
rans-1,2-Dichloro		"	ND		1.00	"	"	"	"	"	
,2-Dichloropropa		"	ND		1.00	"	"	"	"	"	

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Sandra Yakamavich, Project Manager







PES Environmental

9 Lake Bellevue Dr Ste 108

Bellevue, WA/USA 98005

Project Name:

Shell Terminal - 2555 13th SW, Seattle, WA

Project Number: Project Manager: SAP 357032, RIPR 57904 Bill Haldeman

Report Created:

05/03/07 15:54

Purgeables by EPA Method 624

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-04 (Trip Blank)		Wa	ter		Sampl	ed: 04/1	13/07 17:30		·	
cis-1,3-Dichloropropene	EPA 624	ND		1.00	ug/l	1x	7D24029	04/24/07 12:19	04/24/07 14:50	·
trans-1,3-Dichloropropene	"	ND		1.00	"	"	"	"	"	
Ethylbenzene	"	ND		1.00	"	"	"	"	"	
2-Hexanone	"	ND		10.0	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND		10.0	"	"	"	"	"	
Methylene chloride	"	ND		5.00	"	"	"	"	"	
Styrene	"	ND		1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND		1.00	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND		1.00	"	"	"	"	"	
Tetrachloroethene	"	ND		1.00	"	"	"	"	"	
Toluene	"	ND		1.00	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND		1.00	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND		1.00	"	"	"	"	"	
Trichloroethene	"	ND		1.00	"	"	"	"	"	
Trichlorofluoromethane	"	ND		1.00	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND		1.00	"	"	"	"	"	
Vinyl acetate	"	ND		5.00	"	"	"	"	"	
Vinyl chloride	"	ND		1.00	"	"	"	"	"	
o-Xylene	"	ND		1.00	"	"	"	"	"	
m,p-Xylene	"	ND		2.00	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4			99.0%		70 - 130 %	"			"	
Toluene-d8			100%		70 - 130 %	"			"	
4-BFB			102%		70 - 130 %	"			"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01 (Outfall-1-041307)		Wa	iter		Samj	pled: 04/1	3/07 17:30			
Acenaphthene	EPA 625	ND		9.80	ug/l	1x	7D20023	04/20/07 11:38	04/24/07 22:06	
Acenaphthylene	"	ND		9.80	"	"	"	"	"	
Aniline	"	ND		9.80	"	"	"	"	"	
Anthracene	"	ND		9.80	"	"	"	"	"	
1,2-Diphenylhydrazine (as	"	ND		19.6	"	"	"	"	"	
Azobenzene)										
Benzidine	"	ND		19.6	"	"	"	"	"	
Benzo (a) anthracene	"	ND		9.80	"	"	"	"	"	
Benzo (a) pyrene	"	ND		9.80	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND		9.80	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND		9.80	"	"	"	"	"	
Benzo (ghi) perylene	"	ND		9.80	"	"	"	"	"	
Benzoic Acid	"	ND		19.6	"	"	"	"	"	
Benzyl alcohol	"	ND		9.80	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND		9.80	"	"	"	"	"	
Bis(2-chloroethyl)ether	"	ND		9.80	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	"	ND		9.80	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	"	ND		49.0	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND		9.80	"	"	"	"	"	
Butyl benzyl phthalate	"	ND		9.80	"	"	"	"	"	
Carbazole	"	ND		9.80	"	"	"	"	"	
4-Chloroaniline	"	ND		9.80	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND		9.80	"	"	"	"	"	
1-Chloronaphthalene	"	ND		19.6	"	"	"	"	"	
2-Chloronaphthalene	"	ND		9.80	"	"	"	"	"	
2-Chlorophenol	"	ND		9.80	"	"	"	"	"	
4-Chlorophenyl phenyl ether	"	ND		9.80	"	"	"	"	"	
3 & 4-Methylphenol (m,p-Cresols)	"	ND		9.80	"	"	"	"	"	
2-Methylphenol (o-Cresol)	"	ND		9.80	"	"	"	"	"	
Chrysene	"	ND		9.80	"	"	"	"	"	
Di-n-butyl phthalate	"	ND		9.80	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND		9.80	"	"	"	"	"	
Dibenzofuran	"	ND		9.80	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND		19.6	"	"	"	"	"	
2,4-Dichlorophenol	"	ND		9.80	"	"	"	"	"	
Diethyl phthalate	"	ND		9.80	"	"	"	"	"	
2,4-Dimethylphenol	"	ND		9.80	"	"	"	"	"	
Dimethyl phthalate	"	ND		9.80	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND		9.80	"	"	"	"	"	
2,4-Dinitrophenol	"	ND		19.6	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND		9.80	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND		9.80	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND		9.80	"	"	"	"	"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01 (Outfall-1-041307)		Wa	iter		Sampl	ed: 04/1	3/07 17:30			
Fluoranthene	EPA 625	ND		9.80	ug/l	1x	7D20023	04/20/07 11:38	04/24/07 22:06	
Fluorene	"	ND		9.80	"	"	"	"	"	
Hexachlorobenzene	"	ND		9.80	"	"	"	"	"	
Hexachlorobutadiene	"	ND		9.80	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND		9.80	"	"	"	"	"	
Hexachloroethane	"	ND		9.80	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND		9.80	"	"	"	"	"	
Isophorone	"	ND		9.80	"	"	"	"	"	
1-Methylnaphthalene	"	ND		19.6	"	"	"	"	"	
2-Methylnaphthalene	"	ND		9.80	"	"	"	"	"	
Naphthalene	"	ND		9.80	"	"	"	"	"	
2-Nitroaniline	"	ND		19.6	"	"	"	"	"	
3-Nitroaniline	"	ND		9.80	"	"	"	"	"	
4-Nitroaniline	"	ND		9.80	"	"	"	"	"	
Nitrobenzene	"	ND		9.80	"	"	"	"	"	
2-Nitrophenol	"	ND		9.80	"	"	"	"	"	
4-Nitrophenol	"	ND		9.80	"	"	"	"	"	
N-Nitrosodimethylamine	"	ND		19.6	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND		9.80	"	"	"	"	"	
Di-n-octyl phthalate	"	ND		9.80	"	"	"	"	"	
Pentachlorophenol	"	ND		9.80	"	"	"	"	"	
Phenanthrene	"	ND		9.80	"	"	"	"	"	
Phenol	"	ND		9.80	"	"	"	"	"	
Pyrene	"	ND		9.80	"	"	"	"	"	
Pyridine	"	ND		19.6	"	"	"	"	"	
alpha-Terpineol	"	ND		9.80	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND		9.80	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND		9.80	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND		9.80	"	"	"	"	"	
Surrogate(s): 2-FBP			82.7%		49 - 122 %	"			"	
2-FP			77.9%		20 - 111 %	"			"	
Nitrobenzene-d5			92.4%		50 - 120 %	"			"	
Phenol-d6			83.3%		12 - 120 %	"			"	
p-Terphenyl-d14			68.0%		10 - 138 %	"			"	
2,4,6-TBP			79.2%		22 - 131 %	"			"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Conventional Chemistry Parameters by APHA/EPA Methods

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01 (Outfall-1-04130	07)	Water Sampled: 04/13/07 17:30								
Cyanide (total)	EPA 335.2 Mod	ND		0.0100	mg/l	1x	7D26021	04/24/07 18:00	04/26/07 13:03	
Oil & Grease (HEM)	EPA 1664A	ND		5.10	"	"	7D18040	04/18/07 13:44	04/23/07 10:57	
Total Suspended Solids	EPA 160.2	ND		4.0	"	"	7D16057	04/16/07 15:23	04/17/07 15:23	
Total Petroleum Hydrocarbons (SGT-HEM)	EPA 1664A	ND		5.10	"	"	7D18040	04/18/07 13:44	04/23/07 10:57	
BQD0232-02 (Outfall-2-04130	07)	Wa	iter		Sam	pled: 04/1	13/07 19:50			
Oil & Grease (HEM)	EPA 1664A	ND		5.10	mg/l	1x	7D18040	04/18/07 13:44	04/23/07 10:57	
Total Petroleum Hydrocarbons (SGT-HEM)	"	ND		5.10	"	"	"	"	"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



Shell Terminal - 2555 13th SW, Seattle, WA **PES Environmental** Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: 05/03/07 15:54 Bellevue, WA/USA 98005 Project Manager: Bill Haldeman

Mercury by EPA Method 1631E

TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQD0232-01RE1	(Outfall-1-041307)		Wa	ter		Samj	oled: 04/1	3/07 17:30			
Mercury		EPA 1631E	ND		0.00500	ug/l	1x	7041179	04/26/07 16:27	04/27/07 10:46	
BQD0232-03RE1	(Field Blank)		Wa	ter		Samj	pled: 04/1	3/07 17:30			
Mercury		EPA 1631E	ND		0.00500	ug/l	1x	7041179	04/26/07 16:27	04/27/07 10:51	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results

					Seattle, W									
QC Batch: 7D16025	Water P	reparation	1 Method: F	EPA 5030B	(P/T)									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7D16025-BLK1)								Exti	racted:	04/16/07 10):45			
Gasoline Range Hydrocarbons	NWTPH-Gx/	ND		50.0	ug/l	1x						(04/16/07 13:00	
Benzene	8021B	ND		0.500	"	"							"	
Toluene	"	ND		0.500	"	"							"	
Ethylbenzene	"	ND		0.500	"	"							"	
Xylenes (total)	"	ND		1.00	"	"							"	
Surrogate(s): 4-BFB (FID) 4-BFB (PID)		Recovery:	84.0% 102%	Lin	nits: 58-144% 68-140%	, "							04/16/07 13:00	
LCS (7D16025-BS1)								Exti	racted:	04/16/07 10):45			
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	910		50.0	ug/l	1x		1000	91.0%	(80-120)		(04/16/07 13:32	
Surrogate(s): 4-BFB (FID)		Recovery:	93.3%	Lin	nits: 58-144%	"							04/16/07 13:32	
LCS (7D16025-BS2)								Ext	racted:	04/16/07 10):45			
Benzene	NWTPH-Gx/ 8021B	27.9		0.500	ug/l	1x		30.0	93.0%	(80-120)		(04/16/07 14:04	
Γoluene	"	27.7		0.500	"	"		"	92.3%	"			"	
Ethylbenzene	"	28.0		0.500	"	"		"	93.3%	"			"	
Xylenes (total)	"	84.1		1.00	"	"		90.0	93.4%	"			"	
Surrogate(s): 4-BFB (PID)		Recovery:	102%	Lin	nits: 68-140%	"							04/16/07 14:04	
Duplicate (7D16025-DUP1)				QC Source:	BQD0232-0	1		Exti	racted:	04/16/07 10):45			
Gasoline Range Hydrocarbons	NWTPH-Gx/	ND		50.0	ug/l	1x	ND				NR	(25)	04/16/07 15:07	
Benzene	8021B	ND		0.500	"	"	ND				NR	••	"	
Toluene	"	ND		0.500	"	"	ND				NR	"	"	
Ethylbenzene	"	ND		0.500	"	"	ND				NR	"	"	
Xylenes (total)	"	ND		1.00	"	"	ND				NR	"	"	
Surrogate(s): 4-BFB (FID) 4-BFB (PID)		Recovery:	84.2% 103%	Lin	nits: 58-144% 68-140%	, "							04/16/07 15:07	
Duplicate (7D16025-DUP2)				QC Source:	BQD0131-0	2		Exti	racted:	04/16/07 10):45			
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	180		50.0	ug/l	1x	180				0.00%	(25)	04/16/07 16:12	
Benzene	"	1.81		0.500	"	"	1.83				1.10%	· "	"	
Toluene	"	0.513		0.500	"	"	0.518				0.970%	6 "	"	
Ethylbenzene	"	2.60		0.500	"	"	2.61				0.384%	6 "	"	
Xylenes (total)	"	ND		1.00	"	"	ND				5.48%	· "	"	
Surrogate(s): 4-BFB (FID) 4-BFB (PID)		Recovery:	90.3%	Lin	nits: 58-144%	"							04/16/07 16:12	

TestAmerica - Seattle, WA

Jandra Jaccamerrich

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

Sandra Yakamavich, Project Manager







PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D16025	Water P	reparation	Method: E	PA 5030B	(P/T)									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	REC	(Limits)	% RPD	(Limits) Analyzed	Notes
Matrix Spike (7D16025-MS1)				QC Source:	BQD0232-01			Ext	racted:	04/16/07 10):45			
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	1030		50.0	ug/l	1x	ND	1000	103%	(75-131)			04/16/07 17:15	
Surrogate(s): 4-BFB (FID)		Recovery:	94.5%	Lin	nits: 58-144%	"							04/16/07 17:15	
Matrix Spike (7D16025-MS2)				QC Source:	BQD0131-02			Ext	racted:	04/16/07 10	:45			
Benzene	NWTPH-Gx/ 8021B	31.2		0.500	ug/l	1x	1.83	30.0	97.9%	(46-130)			04/16/07 17:47	
Toluene	"	29.5		0.500	"	"	0.518	"	96.6%	(60-124)			"	
Ethylbenzene	"	33.0		0.500	"	"	2.61	"	101%	(56-141)			"	
Xylenes (total)	"	91.0		1.00	"	"	0.713	90.0	100%	(66-132)			"	
Surrogate(s): 4-BFB (PID)		Recovery:	104%	Lin	nits: 68-140%	"							04/16/07 17:47	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager



BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



Shell Terminal - 2555 13th SW, Seattle, WA **PES Environmental** Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: 05/03/07 15:54 Bellevue, WA/USA 98005 Project Manager: Bill Haldeman

Total Metals by EPA 200 Series Methods - Laboratory Quality Control Results

TestAmerica - Seattle, WA

0.00														
QC Batch: 7D20047	Water P	reparation M	lethod: E	PA 200 Se	ries									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7D20047-BLK1)								Extr	acted:	04/20/07 16	:30			
Cadmium	EPA 200.7	ND		0.00500	mg/l	1x							04/24/07 14:08	
Silver	"	ND		0.0100	"	"							"	
Zinc	"	ND		0.0200	"	"							"	
Lead	"	ND		0.0500	"	"							"	
Copper	"	ND		0.0100	"	"							"	
Arsenic	"	ND		0.100	"	"							"	
Nickel	"	ND		0.0100	"	"							"	
LCS (7D20047-BS1)								Extr	acted:	04/20/07 16	:30			
Lead	EPA 200.7	5.38		0.0500	mg/l	1x		5.00	108%	(85-115)			04/24/07 14:13	
Copper	"	5.50		0.0100	"	"		"	110%	"			"	
Nickel	"	5.46		0.0100	"	"		"	109%	"			"	
Arsenic	"	5.71		0.100	"	"		"	114%	"			"	
Silver	"	1.07		0.0100	"	"		1.00	107%	"			"	
Zinc	"	5.48		0.0200	"	"		5.00	110%	"			"	
Cadmium	"	5.52		0.00500	"	"		"	110%	"			"	
Duplicate (7D20047-DUP1)				QC Source:	BQD0315-	-01		Extr	acted:	04/20/07 16	:30			
Copper	EPA 200.7	ND		0.0100	mg/l	1x	ND				31.7%	(20)	04/24/07 14:29	
Cadmium	"	ND		0.00500	"	"	ND				NR	"	"	
Arsenic	"	ND		0.100	"	"	ND				NR	"	"	
Lead	"	ND		0.0500	"	"	ND				NR	"	"	
Zinc	"	0.0660		0.0200	"	"	0.0646				2.14%	"	"	
Nickel	"	ND		0.0100	"	"	ND				60.0%	"	"	
Silver	"	ND		0.0100	"	"	ND				26.9%	(50)	"	
Matrix Spike (7D20047-MS1)				QC Source:	BQD0315-	-01		Extr	acted:	04/20/07 16	:30			
Cadmium	EPA 200.7	5.50		0.00500	mg/l	1x	ND	5.00	110%	(80-120)			04/24/07 14:19	
Arsenic	"	5.68		0.100	"	"	ND	"	114%	"			"	
Copper	"	5.44		0.0100	"	"	0.00530	"	109%	"			"	
Silver	"	1.07		0.0100	"	"	0.00290	1.00	107%	(70-130)			"	
Zinc	"	5.49		0.0200	"	"	0.0646	5.00	109%	(80-120)			"	
Lead	"	5.37		0.0500	"	"	ND	"	107%	"			"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Total Metals by EPA 200 Series Methods - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D20047	Water P	reparation M	ethod: E	PA 200 Se	ries									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits) Analyzed	Notes
Matrix Spike (7D20047-MS2)				QC Source:	BQD0273	-01		Exti	racted:	04/20/07 16	:30			
Arsenic	EPA 200.7	5.65		0.100	mg/l	1x	ND	5.00	113%	(80-120)			04/24/07 14:24	
Cadmium	"	5.48		0.00500	"	"	ND	"	110%	"			"	
Lead	"	5.38		0.0500	"	"	ND	"	108%	"			"	
Zinc	"	5.44		0.0200	"	"	0.0292	"	108%	"			"	
Copper	"	5.42		0.0100	"	"	0.0103	"	108%	"			"	
Silver	"	1.07		0.0100	"	"	0.00350	1.00	107%	(70-130)			"	
Nickel	"	5.43		0.0100	"	"	ND	5.00	109%	(80-120)			"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager



BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



PES Environmental Shell Terminal - 2555 13th SW, Seattle, WA Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Organochlorine Pesticides and PCBs by EPA Method 608 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D23012	Water I	Preparation M	ethod: El	PA 3520C										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7D23012-BLK1)								Extr	acted:	04/23/07 08	3:52			
Aldrin	EPA 608	ND		0.100	ug/l	1x						(04/26/07 19:47	
alpha-BHC	"	ND		0.0400	"	"							"	
beta-BHC	"	ND		0.0800	"	"							"	
delta-BHC	"	ND		0.100	"	"							"	
gamma-BHC (Lindane)	"	ND		0.0400	"	"							"	
alpha-Chlordane	"	ND		0.0400	"	"							"	
gamma-Chlordane	"	ND		0.0400	"	"							"	
4,4′-DDD	"	ND		0.0800	"	"							"	
4,4´-DDE	"	ND		0.0800	"	"							"	
4,4'-DDT	"	ND		0.0800	"	"							"	
Dieldrin	"	ND		0.0800	"	"							"	
Endosulfan I	"	ND		0.0200	"	"							"	
Endosulfan II	"	ND		0.0800	"	"							"	
Endosulfan sulfate	"	ND		0.100	"	"							"	
Endrin	"	ND		0.0800	"	"							"	
Endrin aldehyde	"	ND		0.200	"	"							"	R1
Endrin ketone	"	ND		0.200	"	"							"	
Heptachlor	"	ND		0.0800	"	"							"	
Heptachlor epoxide	"	ND		0.0400	"	"							"	
Methoxychlor	"	ND		0.500	"	"							"	
Toxaphene	"	ND		2.00	"	"							"	
Aroclor 1016	"	ND		0.500	"	"							"	
Aroclor 1221	"	ND		0.500	"	"							"	
Aroclor 1232	"	ND		0.500	"	"							"	
Aroclor 1242	"	ND		0.500	"	"							"	
Aroclor 1248	"	ND		0.500	"	"							"	
Aroclor 1254	"	ND		0.500	"	"							"	
Aroclor 1260	"	ND		0.500	"	"							"	
Surrogate(s): TCX		Recovery: 97	.5%	Lin	its: 25-129%	6 "							04/26/07 19:47	7

22-125% "

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager

Decachlorobiphenyl

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, $without \ the \ written \ approval \ of \ the \ laboratory.$



94.0%



PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Organochlorine Pesticides and PCBs by EPA Method 608 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D23012	Water	Preparation N	Method: E	PA 3520C										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (7D23012-BS1)								Ext	racted:	04/23/07 08	:52			
Aldrin	EPA 608	0.105		0.100	ug/l	1x		0.125	84.0%	(42-122)			04/26/07 20:07	
alpha-BHC	"	0.122		0.0400	"	"		"	97.6%	(37-134)			"	
beta-BHC	"	0.107		0.0800	"	"		"	85.6%	(17-147)			"	
delta-BHC	"	0.0938		0.100	"	"		"	75.0%	(19-140)			"	
gamma-BHC (Lindane)	"	0.103		0.0400	"	"		"	82.4%	(32-127)			"	
alpha-Chlordane	"	0.116		0.0400	"	"		"	92.8%	(45-119)			"	
gamma-Chlordane	"	0.102		0.0400	"	"		"	81.6%	"			"	
4,4'-DDD	"	0.236		0.0800	"	"		0.250	94.4%	(31-141)			"	
4,4'-DDE	"	0.238		0.0800	"	"		"	95.2%	(30-145)			"	
4,4'-DDT	"	0.236		0.0800	"	"		"	94.4%	(25-160)			"	
Dieldrin	"	0.233		0.0800	"	"		"	93.2%	(36-146)			"	
Endosulfan I	"	0.118		0.0200	"	"		0.125	94.4%	(45-153)			"	
Endosulfan II	"	0.239		0.0800	"	"		0.250	95.6%	(10-202)			"	
Endosulfan sulfate	"	0.237		0.100	"	"		"	94.8%	(26-144)			"	
Endrin	"	0.227		0.0800	"	"		"	90.8%	(30-147)			"	
Endrin aldehyde	"	0.258		0.200	"	"		"	103%	"			"	
Endrin ketone	"	0.245		0.200	"	"		"	98.0%	"			"	
Heptachlor	"	0.0989		0.0800	"	"		0.125	79.1%	(34-111)			"	
Heptachlor epoxide	"	0.106		0.0400	"	"		"	84.8%	(37-142)			"	
Methoxychlor	"	1.05		0.500	"	"		1.25	84.0%	(25-160)			"	
Surrogate(s): TCX		Recovery: 9	92.5%	Lin	nits: 25-129%	6 "							04/26/07 20:0	7
Decachlorobiphenyl		9	00.5%		22-125	% "							"	

LCS Dup (7D23012-BSD1)						Exti	racted:	04/23/07 08:	:52	
Aldrin	EPA 608	0.108	 0.100	ug/l	1x	 0.125	86.4%	(42-122)	2.82% (35)	04/26/07 20:28
alpha-BHC	"	0.132	 0.0400	"	"	 "	106%	(37-134)	7.87% "	"
oeta-BHC	"	0.108	 0.0800	"	"	 "	86.4%	(17-147)	0.930% "	"
delta-BHC	"	0.0943	 0.100	"	"	 "	75.4%	(19-140)	0.532% "	"
gamma-BHC (Lindane)	"	0.108	 0.0400	"	"	 "	86.4%	(32-127)	4.74% "	"
lpha-Chlordane	"	0.117	 0.0400	"	"	 "	93.6%	(45-119)	0.858% "	"
gamma-Chlordane	"	0.104	 0.0400	"	"	 "	83.2%	"	1.94% "	"
,4′-DDD	"	0.239	 0.0800	"	"	 0.250	95.6%	(31-141)	1.26% "	"
,4´-DDE	"	0.235	 0.0800	"	"	 "	94.0%	(30-145)	1.27% "	"
,4′-DDT	"	0.221	 0.0800	"	"	 "	88.4%	(25-160)	6.56% "	"
Dieldrin	"	0.234	 0.0800	"	"	 "	93.6%	(36-146)	0.428% "	"
Endosulfan I	"	0.123	 0.0200	"	"	 0.125	98.4%	(45-153)	4.15% "	"
Endosulfan II	"	0.235	 0.0800	"	"	 0.250	94.0%	(10-202)	1.69% "	"
ndosulfan sulfate	"	0.239	 0.100	"	"	 "	95.6%	(26-144)	0.840% "	"
indrin	"	0.221	 0.0800	"	"	 "	88.4%	(30-147)	2.68% "	"

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210



Shell Terminal - 2555 13th SW, Seattle, WA **PES Environmental** Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Organochlorine Pesticides and PCBs by EPA Method 608 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D23012	Water	Preparation	Method: El	PA 3520C									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	o¼ (Limi RPD	ts) Analyzed	Notes
LCS Dup (7D23012-BSD1)								Ext	racted:	04/23/07 08	:52		
Endrin aldehyde	EPA 608	0.259		0.200	ug/l	1x		0.250	104%	(30-147)	0.387% (35)	04/26/07 20:28	
Endrin ketone	"	0.246		0.200	"	"		"	98.4%	"	0.407% "	"	
Heptachlor	"	0.107		0.0800	"	"		0.125	85.6%	(34-111)	7.87% "	"	
Heptachlor epoxide	"	0.108		0.0400	"	"		"	86.4%	(37-142)	1.87% "	"	
Methoxychlor	"	0.982		0.500	"	"		1.25	78.6%	(25-160)	6.69% "	"	
Surrogate(s): TCX		Recovery:	102%	Lin	nits: 25-129%	"						04/26/07 20:28	
Decachlorobinhenyl			90.5%		22-125%	"						"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Purgeables by EPA Method 624 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D24029	Water I	Preparation M	lethod: EP	A 5030B										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7D24029-BLK1)								Extr	acted:	04/24/07 10	:19			
Acetone	EPA 624	ND		10.0	ug/l	1x							04/24/07 13:31	
Acetonitrile	"	ND		5.00	"	"							"	
Acrolein	"	ND		5.00	"	"							"	
Acrylonitrile	"	ND		5.00	"	"							"	
Benzene	"	ND		1.00	"	"							"	
Bromodichloromethane	"	ND		1.00	"	"							"	
Bromoform	"	ND		1.00	"	"							"	
Bromomethane	"	ND		2.00	"	"							"	
2-Butanone	"	ND		10.0	"	"							"	
Carbon disulfide	"	ND		1.00	"	"							"	
Carbon tetrachloride	"	ND		1.00	"	"							"	
Chlorobenzene	"	ND		1.00	"	"							"	
Chloroethane	"	ND		1.00	"	"							"	
2-Chloroethylvinyl ether	"	ND		5.00	"								"	
Chloroform	"	ND		1.00	"								"	
Chloromethane	"	ND		5.00	"								"	
Dibromochloromethane	"	ND		1.00	"								"	
1,2-Dibromo-3-chloropropane	,,	ND		5.00	"	,,							"	
1,2-Dibromoethane	,,	ND		1.00	"								"	
Dibromomethane	,,	ND		1.00	"	,,							"	
1,2-Dichlorobenzene	,,	ND		1.00	"	,,							"	
1,3-Dichlorobenzene	,,	ND		1.00	"								,,	
1,4-Dichlorobenzene	,,	ND		1.00	"	,,							,,	
Dichlorodifluoromethane	"	ND		1.00	"					_			,,	
1,1-Dichloroethane	,,	ND		1.00	,,	,,							,,	
1,2-Dichloroethane	"	ND		1.00	,,								,,	
1,1-Dichloroethene	"	ND		1.00	,,	,,		_					,,	
cis-1,2-Dichloroethene	"	ND		1.00	,,	,,		_		_			,,	
trans-1,2-Dichloroethene	,,	ND		1.00	,,	,,		_	_	_			,,	
1,2-Dichloropropane	,,	ND		1.00	,,	,,							,,	
	,,				,,	,			-		-		,,	
cis-1,3-Dichloropropene	,,	ND ND		1.00 1.00	,,	,,							,,	
trans-1,3-Dichloropropene				1.00	,,	,							,,	
Ethylbenzene		ND			,,	,							,,	
2-Hexanone		ND		10.0	,,	,							,,	
4-Methyl-2-pentanone		ND		10.0	,,									
Methylene chloride		ND		5.00										
Styrene		ND		1.00									"	
1,1,1,2-Tetrachloroethane		ND		1.00	"	"								
1,1,2,2-Tetrachloroethane	"	ND		1.00	"	"							"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





Shell Terminal - 2555 13th SW, Seattle, WA **PES Environmental** Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Purgeables by EPA Method 624 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D24029	Water	Preparation N	Aethod: EP	A 5030B	!									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	e % REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7D24029-BLK1)								Ext	racted:	04/24/07 10	:19			
Tetrachloroethene	EPA 624	ND		1.00	ug/l	1x						(04/24/07 13:31	
Toluene	"	ND		1.00	"	"							"	
1,1,1-Trichloroethane	"	ND		1.00	"	"							"	
1,1,2-Trichloroethane	"	ND		1.00	"	"							"	
Trichloroethene	"	ND		1.00	"	"							"	
Trichlorofluoromethane	"	ND		1.00	"	"							"	
1,2,3-Trichloropropane	"	ND		1.00	"	"							"	
Vinyl acetate	"	ND		5.00	"	"							"	
Vinyl chloride	"	ND		1.00	"	"							"	
o-Xylene	"	ND		1.00	"	"							"	
m,p-Xylene	"	ND		2.00	"	"							"	
Surrogate(s): 1,2-DCA-d4		Recovery: 9	18.5%	Lin	nits: 70-130%	"							04/24/07 13:31	
Toluene-d8		•	102%		70-130%	"							"	
4-BFB		i	100%		70-130%	"							"	
LCS (7D24029-BS1)										04/24/07 10	:19			
Acetone	EPA 624	175		10.0	ug/l	1x		200	87.5%	(70-130)		(04/24/07 11:43	
Benzene	"	18.4		1.00	"	"		20.0	92.0%	(75-125)			"	
Bromodichloromethane	"	18.6		1.00	"	"		"	93.0%	"			"	
Bromoform	"	18.6		1.00	"	"		"	93.0%	"			"	
Bromomethane	"	18.7		2.00	"	"		"	93.5%	"			"	
2-Butanone	"	186		10.0	"	"		200	93.0%	(70-130)			"	
Carbon disulfide	"	19.3		1.00	"	"		20.0	96.5%	"			"	
Carbon tetrachloride	"	20.0		1.00	"	"		"	100%	(75-125)			"	
Chlorobenzene	"	17.6		1.00	"	"		"	88.0%	"			"	
Chloroethane	"	19.7		1.00	"	"		"	98.5%	"			"	
Chloroform	"	18.0		1.00	"	"		"	90.0%	"			"	
Chloromethane	"	17.6		5.00	"	"		"	88.0%	"			"	
Dibromochloromethane	"	18.2		1.00	"	"		"	91.0%	"			"	
1,2-Dibromo-3-chloropropane	"	18.3		5.00	"	"		"	91.5%	(70-130)			"	
1,2-Dibromoethane	"	18.6		1.00	"	"		"	93.0%	"			"	
Dibromomethane	"	19.3		1.00	"	"		"	96.5%	"			"	
1,2-Dichlorobenzene	"	18.3		1.00	"	"		"	91.5%	(75-125)			"	
1,3-Dichlorobenzene	"	18.5		1.00	"	"		"	92.5%	"			"	
1,4-Dichlorobenzene	"	18.7		1.00	"	"		"	93.5%	"			"	
Dichlorodifluoromethane	"	20.2		1.00	"	"		"	101%	(70-130)			"	
1,1-Dichloroethane	"	18.6		1.00	"	"		"	93.0%	(75-125)			"	
1,2-Dichloroethane	"	19.8		1.00	"	"		"	99.0%	"			"	
1,1-Dichloroethene	"	19.2		1.00	"			,,	96.0%				"	

TestAmerica - Seattle, WA

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The results in this report apply to the samples analyzed in accordance with the chain

Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Purgeables by EPA Method 624 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D24029	Water 1	Preparation I	Method: EP	A 5030B										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits) Analyzed	Notes
LCS (7D24029-BS1)								Ext	racted:	04/24/07 10):19			
cis-1,2-Dichloroethene	EPA 624	18.8		1.00	ug/l	1x		20.0	94.0%	(70-130)			04/24/07 11:43	
trans-1,2-Dichloroethene	"	19.3		1.00	"	"		"	96.5%	(75-125)			"	
1,2-Dichloropropane	"	19.3		1.00	"	"		"	96.5%	"			"	
cis-1,3-Dichloropropene	"	19.8		1.00	"	"		"	99.0%	"			"	
trans-1,3-Dichloropropene	"	19.5		1.00	"	"		"	97.5%	"			"	
Ethylbenzene	"	17.5		1.00	"	"		"	87.5%	"			"	
2-Hexanone	"	186		10.0	"	"		200	93.0%	(70-130)			"	
4-Methyl-2-pentanone	"	186		10.0	"	"		"	93.0%	"			"	
Methylene chloride	"	18.2		5.00	"	"		20.0	91.0%	(75-125)			"	
Styrene	"	17.7		1.00	"	"		"	88.5%	(70-130)			"	
1,1,1,2-Tetrachloroethane	"	17.9		1.00	"	"		"	89.5%	"			"	
1,1,2,2-Tetrachloroethane	"	18.3		1.00	"	"		"	91.5%	(75-125)			"	
Tetrachloroethene	"	18.1		1.00	"	"		"	90.5%	(75-130)			"	
Toluene	"	17.8		1.00	"	"		"	89.0%	(75-120)			"	
1,1,1-Trichloroethane	"	19.0		1.00	"	"		"	95.0%	(75-130)			"	
1,1,2-Trichloroethane	"	17.8		1.00	"	"		"	89.0%	"			"	
Trichloroethene	"	18.8		1.00	"	"		"	94.0%	(75-120)			"	
Trichlorofluoromethane	"	19.3		1.00	"	"		"	96.5%	(75-130)			"	
1,2,3-Trichloropropane	"	17.9		1.00	"	"		"	89.5%	(70-130)			"	
Vinyl chloride	"	19.6		1.00	"	"		"	98.0%	(75-125)			"	
o-Xylene	"	17.8		1.00	"	"		"	89.0%	(70-130)			"	
m,p-Xylene	"	36.1		2.00	"	"		40.0	90.2%	"			"	
Surrogate(s): 1,2-DCA-d4		Recovery:	100%	Lin	nits: 70-1309	% "							04/24/07 11:43	3
Toluene-d8		•	96.5%		70-130								"	
4-BFB		9	98.0%		70-130	% "							"	
LCS Dup (7D24029-BSD1)								Ext	racted:	04/24/07 10	:19			
Acetone	EPA 624	177		10.0	ug/l	1x		200	88.5%	(70-130)	1.14%	6 (20)	04/24/07 12:17	
Benzene	"	18.8		1.00	"	"		20.0	94.0%	(75-125)	2.15%		"	
Bromodichloromethane	,,	19.1		1.00	,,	"		"	95.5%	"	2.65%		"	
Bromoform	,,	18.8		1.00	,,	"		"	94.0%		1.07%		"	
Bromomethane	,,	20.2		2.00	"	"		,,	101%	"	7.71%		"	
2-Butanone	,,	188		10.0	"	"		200	94.0%	(70-130)	1.07%		"	
Carbon disulfide	,,	19.3		1.00	"	"		20.0	96.5%	"	0.00%		"	
Carbon tetrachloride	"	19.5		1.00	,,	"		20.0	97.5%	(75-125)	2.53%		,,	
Chlorobenzene	,,	18.5		1.00	,,	,,		,,	92.5%	(73-123)	4.99%		"	
	,,	19.9		1.00	,,	,,		,,	92.5%		1.01%		,,	
Chloroethane		19.9		1.00					99.5%		1.01%	0	-	

TestAmerica - Seattle, WA

Chloroform

Chloromethane

Sandra Yakamavich, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

4.88% " 6.06% "

94.5%

93.5%

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1.00

5.00

18.9

18.7





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Purgeables by EPA Method 624 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone 4-Methyl-2-pentanone Methylene chloride Styrene 1,1,1,2-Tetrachloroethane	PA 624	18.7 18.1 19.1 19.5 19.1 19.2 19.4 18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 1.00 5.00 1.00 1.00 1.00 1.00 1.00 1.00	ug/1	1x		Extr 20.0	93.5% 90.5% 95.5% 97.5% 95.5% 96.0% 97.0% 99.0% 95.0% 98.5% 99.5%	04/24/07 10 (75-125) (70-130) " (75-125) " (70-130) (75-125) " (70-130) (75-125)	2.71% 1.10% 2.65% 1.03% 4.28% 3.71% 3.67% 4.21% 0.00% 4.68% 3.06%		04/24/07 12:17	
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropane cis-1,3-Dichloropropene Ethylbenzene 2-Hexanone 4-Methyl-2-pentanone Methylene chloride Styrene 1,1,1,2-Tetrachloroethane		18.1 19.1 19.5 19.1 19.2 19.4 18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 5.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00					90.5% 95.5% 97.5% 95.5% 96.0% 97.0% 99.0% 95.0% 98.5% 99.5%	(70-130) " (75-125) " (70-130) (75-125) " (70-130) (75-125)	1.10% 2.65% 1.03% 4.28% 3.71% 3.67% 11.5% 4.21% 0.00% 1.05% 4.68%		"	
1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone 4-Methyl-2-pentanone Methylene chloride Styrene 1,1,1,2-Tetrachloroethane		19.1 19.5 19.1 19.2 19.4 18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00			-		95.5% 97.5% 95.5% 96.0% 97.0% 90.0% 97.0% 95.0% 98.5% 99.5%	" (75-125) " (70-130) (75-125) " (70-130) (75-125)	2.65% 1.03% 4.28% 3.71% 3.67% 11.5% 4.21% 0.00% 1.05% 4.68%			
Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethene 1,1-Dichloroethene 1,2-Dichloroethene 1,2-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,1-1,2-Tetrachloroethane		19.5 19.1 19.2 19.4 18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00			 		97.5% 95.5% 96.0% 97.0% 90.0% 97.0% 99.0% 95.0% 98.5%	" (75-125) " (70-130) (75-125) " (70-130) (75-125)	1.03% 4.28% 3.71% 3.67% 11.5% 4.21% 0.00% 1.05% 4.68%			
1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene sis-1,2-Dichloroethene 1,2-Dichloropropane sis-1,3-Dichloropropene trans-1,3-Dichloropropene ethylbenzene 2-Hexanone 4-Methyl-2-pentanone Methylene chloride Styrene 1,1,1,2-Tetrachloroethane		19.1 19.2 19.4 18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00		" " " " " " " " " " " " " " " " " " " "	 	" " " " " " " " " " " " " " " " " " " "	95.5% 96.0% 97.0% 90.0% 97.0% 99.0% 95.0% 98.5%	(75-125) " (70-130) (75-125) " (70-130) (75-125)	4.28% 3.71% 3.67% 11.5% 4.21% 0.00% 1.05% 4.68%	" " " " " " " " " " " " " " " " " " " "		
1,3-Dichlorobenzene 1,4-Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,2-Dichloroethene 1,2-Dichloroethene 1,2-Dichloropropane 1,2-Dichloropropene 1,3-Dichloropropene 1,3-Dichloropropene 1,1,1-2-Tetrachloroethane 1,1,1,2-Tetrachloroethane		19.2 19.4 18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	 		96.0% 97.0% 90.0% 97.0% 99.0% 95.0% 98.5%	(70-130) (75-125) " (70-130) (75-125)	3.71% 3.67% 11.5% 4.21% 0.00% 1.05% 4.68%	" " " " " " " " " " " " " " " " " " " "		
1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene 1,1-Dichloroethene 1,2-Dichloroethene 1,2-Dichloropthene 1,2-Dichloropropane 1,3-Dichloropropene 1,3-Dichloropropene 1,1-1,2-Dichloropropene 1,1,1,2-Tetrachloroethane 1,1,1,2-Tetrachloroethane	"	19.4 18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00 1.00 1.00	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	 	" " " "	97.0% 90.0% 97.0% 99.0% 95.0% 98.5% 99.5%	" (70-130) (75-125) " (70-130) (75-125)	3.67% 11.5% 4.21% 0.00% 1.05% 4.68%	" " " " " " " " " " " " " " " " " " " "	" " " " " " " "	
Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene rans-1,2-Dichloroethene 1,2-Dichloropropane cis-1,3-Dichloropropene cis-1,3-Dichloropropene citylbenzene 2-Hexanone 1-Methyl-2-pentanone Methylene chloride Styrene 1,1,1,2-Tetrachloroethane	"	18.0 19.4 19.8 19.0 19.7 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00 1.00	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	- - - -	" " " "	90.0% 97.0% 99.0% 95.0% 98.5% 99.5%	(70-130) (75-125) " (70-130) (75-125)	11.5% 4.21% 0.00% 1.05% 4.68%		" " " " "	
,1-Dichloroethane ,2-Dichloroethene iis-1,2-Dichloroethene rans-1,2-Dichloroethene ,2-Dichloropropane iis-1,3-Dichloropropene rans-1,3-Dichloropropene ethylbenzene 2-Hexanone 1-Methyl-2-pentanone Methylene chloride Styrene ,1,1,2-Tetrachloroethane	"	19.4 19.8 19.0 19.7 19.9 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00 1.00	" " " " " " " " " " " " " " " " " " " "	"	 	" " "	97.0% 99.0% 95.0% 98.5% 99.5%	(75-125) " (70-130) (75-125)	4.21% 0.00% 1.05% 4.68%	"	" " " " " " " " " " " " " " " " " " " "	
1,2-Dichloroethane 1,1-Dichloroethene 2,1-Dichloroethene 2,2-Dichloroethene 1,2-Dichloropropane 2,3-Dichloropropene 2,3-Dichloropropene 2,4-Mexanone 1,4-Methyl-2-pentanone Methylene chloride 8tyrene 1,1,1,2-Tetrachloroethane	"	19.8 19.0 19.7 19.9 19.9 20.4 20.3	 1.00 1.00 1.00 1.00 1.00	" " "	"	 	" " "	99.0% 95.0% 98.5% 99.5%	" (70-130) (75-125)	0.00% 1.05% 4.68%	"	" " " " "	
,1-Dichloroethene cis-1,2-Dichloroethene rans-1,2-Dichloroethene ,2-Dichloropropane cis-1,3-Dichloropropene cars-1,3-Dichloropropene citylbenzene d-Hexanone d-Methyl-2-pentanone Methylene chloride Styrene ,1,1,2-Tetrachloroethane	"	19.0 19.7 19.9 19.9 20.4 20.3	 1.00 1.00 1.00 1.00	" "	"	 	"	95.0% 98.5% 99.5%	" (70-130) (75-125)	1.05% 4.68%	"	" " "	
cis-1,2-Dichloroethene rans-1,2-Dichloroethene ,2-Dichloropropane cis-1,3-Dichloropropene rans-1,3-Dichloropropene Ethylbenzene 2-Hexanone d-Methyl-2-pentanone Methylene chloride Styrene ,1,1,2-Tetrachloroethane	"	19.7 19.9 19.9 20.4 20.3	 1.00 1.00 1.00	" "	"		"	98.5% 99.5%	(70-130) (75-125)	4.68%	"	" "	
rans-1,2-Dichloroethene ,2-Dichloropropane cis-1,3-Dichloropropene cans-1,3-Dichloropropene cthylbenzene 2-Hexanone 1-Methyl-2-pentanone Methylene chloride Styrene ,1,1,2-Tetrachloroethane	"	19.9 19.9 20.4 20.3	 1.00 1.00	"			"	99.5%	(75-125)			"	
,2-Dichloropropane cis-1,3-Dichloropropene cans-1,3-Dichloropropene cathylbenzene 2-Hexanone 1-Methyl-2-pentanone Methylene chloride Styrene ,1,1,2-Tetrachloroethane	"	19.9 20.4 20.3	 1.00	"					` ′	3.06%	"	"	
is-1,3-Dichloropropene rans-1,3-Dichloropropene Ethylbenzene I-Hexanone I-Methyl-2-pentanone Methylene chloride Styrene I,1,1,2-Tetrachloroethane	"	20.4 20.3					"	99 50/-					
rans-1,3-Dichloropropene EthylbenzeneHexanoneMethyl-2-pentanone Methylene chloride Styrene	"	20.3	1.00	"				11.3/0	"	3.06%	. "	"	
Ethylbenzene 1-Hexanone 1-Methyl-2-pentanone Methylene chloride Styrene 1,1,2-Tetrachloroethane							"	102%	"	2.99%	"	"	
2-Hexanone 1-Methyl-2-pentanone Methylene chloride Styrene ,1,1,2-Tetrachloroethane	"	10.4	 1.00	"	"		"	102%	"	4.02%	"	"	
-r-rexanone J-Methyl-2-pentanone Methylene chloride Styrene ,1,1,2-Tetrachloroethane		18.4	 1.00	"	"		"	92.0%	"	5.01%	"	"	
Methylene chloride Styrene ,1,1,2-Tetrachloroethane	"	195	 10.0	"	"		200	97.5%	(70-130)	4.72%	"	"	
Styrene ,1,1,2-Tetrachloroethane	"	188	 10.0	"	"		"	94.0%	"	1.07%	"	"	
1,1,1,2-Tetrachloroethane	"	18.7	 5.00	"	"		20.0	93.5%	(75-125)	2.71%	"	"	
	"	19.3	 1.00	"	"		"	96.5%	(70-130)	8.65%	"	"	
	"	18.7	 1.00	"	"		"	93.5%	"	4.37%		"	
,1,2,2-Tetrachloroethane	"	18.5	 1.00	"	"		"	92.5%	(75-125)	1.09%		"	
Fetrachloroethene	"	18.8	 1.00	"	"		"	94.0%	(75-130)	3.79%		"	
Toluene	"	18.6	 1.00	"	"		"	93.0%	(75-120)	4.40%		"	
,1,1-Trichloroethane	"	19.1	 1.00	"	"		"	95.5%	(75-130)	0.525%	ó "	"	
,1,2-Trichloroethane	"	18.6	 1.00	"	"		"	93.0%	"	4.40%		"	
richloroethene	"	19.2	 1.00	"	"		"	96.0%	(75-120)	2.11%		"	
richlorofluoromethane	"	18.2	 1.00	"	"		"	91.0%	(75-130)	5.87%	"	"	
	"	18.0	 1.00	"	"		"	90.0%	(70-130)	0.557%		"	
Vinyl chloride	"	19.4	 1.00	"	"		"	97.0%	(75-125)	1.03%		"	
· ·	"	18.9	 1.00	"	"		"	94.5%	(70-130)	5.99%		"	
·	"	37.7	 2.00	"	"		40.0	94.2%	"	4.34%		"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager

4-BFB

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70-130% "

99.5%



PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D20023	Water I	Preparation M	lethod: EP	A 3520C										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7D20023-BLK2)								Extra	acted:	04/20/07 11	:38			
Acenaphthene	EPA 625	ND		10.0	ug/l	1x							04/24/07 19:25	
Acenaphthylene	"	ND		10.0	"	"							"	
Aniline	"	ND		10.0	"	"							"	
Anthracene	"	ND		10.0	"	"							"	
1,2-Diphenylhydrazine (as Azobenzene)	"	ND		20.0	"	"							"	
Benzidine	"	ND		20.0	"	"							"	
Benzo (a) anthracene	"	ND		10.0	"	"							"	
Benzo (a) pyrene	"	ND		10.0	"	"							"	
Benzo (b) fluoranthene	"	ND		10.0	"	"							"	
Benzo (k) fluoranthene	"	ND		10.0	"	"							"	
Benzo (ghi) perylene	"	ND		10.0	"	"							"	
Benzoic Acid	"	ND		20.0	"	"							"	
Benzyl alcohol	"	ND		10.0	"	"							"	
Bis(2-chloroethoxy)methane	"	ND		10.0	"	"							"	
Bis(2-chloroethyl)ether	"	ND		10.0	"	"							"	
Bis(2-chloroisopropyl)ether	"	ND		10.0	"								,,	
Bis(2-ethylhexyl)phthalate	"	ND		50.0	"	"							"	
4-Bromophenyl phenyl ether	"	ND		10.0	"	"							"	
Butyl benzyl phthalate	"	ND		10.0	"	"							"	
Carbazole	"	ND		10.0	"	"							"	
4-Chloroaniline	"	ND		10.0	"								"	
4-Chloro-3-methylphenol	,,	ND		10.0	"	,,							"	
1-Chloronaphthalene	,,	ND		20.0	"	,,							"	
2-Chloronaphthalene	,,	ND		10.0	"	,,							"	
2-Chlorophenol	,,	ND		10.0	"	,,							"	
4-Chlorophenyl phenyl ether	,,	ND		10.0	"	,,							,,	
3 & 4-Methylphenol (m,p-Cresols)	,,	ND		10.0	"								,,	
2-Methylphenol (o-Cresol)	,,	ND		10.0	"	,,							"	
Chrysene	,,	ND		10.0	,,	,,				_			,,	
Di-n-butyl phthalate	,,	ND		10.0	,,	,,				_			,,	
Dibenz (a,h) anthracene	"	ND		10.0	,,	,,				_			,,	
Dibenzofuran	,,	ND ND		10.0	,,	,,							,,	
1,2-Dichlorobenzene	,,	ND		10.0	,,	,,							,	
1,3-Dichlorobenzene	,,	ND		10.0	,,	,,							,	
1,4-Dichlorobenzene	,,	ND ND		10.0	,,	,,							,,	
3,3'-Dichlorobenzidine	,,	ND ND		20.0	"	,,			-				,,	
	,	ND ND		10.0	,,	,				-	-		,,	
2,4-Dichlorophenol					,,								,,	
Diethyl phthalate		ND		10.0										
2,4-Dimethylphenol	.,	ND		10.0	"									

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Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch	: 7D20023	Water I	Preparation	Method: EP	A 3520C										
Analyte		Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits) Analyzed	Notes
Blank (7D2002	3-BLK2)								Extr	acted:	04/20/07 11	:38			
Dimethyl phthalate		EPA 625	ND		10.0	ug/l	1x							04/24/07 19:25	
4,6-Dinitro-2-methylp	henol	"	ND		10.0	"	"							"	
2,4-Dinitrophenol		"	ND		20.0	"	"							"	
2,4-Dinitrotoluene		"	ND		10.0	"	"							"	
2,6-Dinitrotoluene		"	ND		10.0	"	"							"	
N-Nitrosodiphenylami	ne	"	ND		10.0	"	"							"	
Fluoranthene		"	ND		10.0	"	"								
Fluorene		"	ND		10.0	"	"								
Hexachlorobenzene		"	ND		10.0	"	"								
Hexachlorobutadiene		"	ND		10.0	"	"							"	
Hexachlorocyclopenta	diene	"	ND		10.0	"	"							"	
Hexachloroethane		"	ND		10.0	"	"							"	
Indeno (1,2,3-cd) pyre	ne	"	ND		10.0	"	"							"	
Isophorone		"	ND		10.0	"	"							"	
1-Methylnaphthalene		"	ND		20.0	"	"							,,	
2-Methylnaphthalene		"	ND		10.0	"	"							,,	
Naphthalene		"	ND		10.0	"	"							,,	
2-Nitroaniline		"	ND		20.0	"	"							,,	
3-Nitroaniline		"	ND		10.0	"	"							,,	
4-Nitroaniline		"	ND		10.0	"	"							,,	
Nitrobenzene		"	ND		10.0	"	"								
2-Nitrophenol		"	ND		10.0	"	,,							,,	
4-Nitrophenol		"	ND		10.0	,,	,,								
N-Nitrosodimethylami	ne	"	ND		20.0	"	,,							,,	
N-Nitrosodi-n-propyla		"	ND		10.0	"	,,							,,	
Di-n-octyl phthalate	mine	"	ND		10.0	,,	,,								
Pentachlorophenol		"	ND		10.0	,,	,,		_						
Phenanthrene		"	ND		10.0	"	,,								
Phenol		,,	ND		10.0	,,	,			_		_		,,	
Pyrene		,,	ND ND		10.0	"	,,							,,	
-		,,			20.0	,,	,			-		-			
Pyridine		,,	ND ND		10.0	,,	,				-			,,	
alpha-Terpineol 1,2,4-Trichlorobenzene		,,	ND ND		10.0	,,								,,	
	5	,,			10.0	,,	,			_				,,	
2,4,5-Trichlorophenol			ND ND		10.0	,,									
2,4,6-Trichlorophenol									-						
	2-FBP			91.6%	Lin	nits: 49-122%								04/24/07 19:2.	5
	2-FP			94.8%		20-111%								"	
	Nitrobenzene-d5 Phenol-d6			107% 97.9%		50-120% 12-120%								,,	
	1 пепон-ио			71.970		12-120%	0								

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager

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QC Batch: 7D20023

PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

Water Preparation Method: EPA 3520C

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625 - Laboratory Quality Control Results

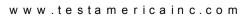
TestAmerica - Seattle, WA

Analyte Method Result MDL* MRL Units Dil Source Spike % (Limits) % (Limits) Analyzed Notes

Analyte	Method	Kesuit	MIDL	WIKL	Units	DII	Result	Amt	REC	(Lillits)	RPD	(Lillits)	Allalyzeu	Notes
Blank (7D20023-BLK2)								Ext	racted:	04/20/07 11	:38			
Surrogate(s): p-Terphenyl-d14 2,4,6-TBP		•	01% 5.4%	Lim	its: 10-138% 22-131%	1x "							04/24/07 19:25 "	
LCS (7D20023-BS1)								Ext	racted:	04/20/07 11	:38			
Acenaphthene	EPA 625	88.9		10.0	ug/l	1x		100	88.9%	(47-145)			04/24/07 19:57	
Acenaphthylene	"	85.3		10.0	"	"		"	85.3%	(33-145)			"	
Anthracene	"	88.2		10.0	"	"		"	88.2%	(27-133)			"	
1,2-Diphenylhydrazine (as Azobenzene)	"	86.4		20.0	"	"		"	86.4%	(25-150)			"	
Benzo (a) anthracene	"	88.5		10.0	"	"		"	88.5%	(33-143)			"	
Benzo (a) pyrene	"	88.7		10.0	"	"		"	88.7%	(25-163)			"	
Benzo (b) fluoranthene	"	79.0		10.0	"	"		"	79.0%	(25-159)			"	
Benzo (k) fluoranthene	"	97.7		10.0	"	"		"	97.7%	(25-162)			"	
Benzo (ghi) perylene	"	72.9		10.0	"	"		"	72.9%	(25-219)			"	
Bis(2-chloroethoxy)methane	"	85.2		10.0	"	"		"	85.2%	(33-184)			"	
Bis(2-chloroethyl)ether	"	81.0		10.0	"	"		"	81.0%	(25-158)			"	
Bis(2-chloroisopropyl)ether	"	72.0		10.0	"	"		"	72.0%	(36-166)			"	
Bis(2-ethylhexyl)phthalate	"	87.5		50.0	"	"		"	87.5%	(25-158)			"	
4-Bromophenyl phenyl ether	"	78.3		10.0	"	"		"	78.3%	(53-127)			"	
Butyl benzyl phthalate	"	90.9		10.0	"	"		"	90.9%	(25-152)			"	
2-Chloronaphthalene	"	70.0		10.0	"	"		"	70.0%	(60-118)			"	
2-Chlorophenol	"	87.3		10.0	"	"		"	87.3%	(25-134)			"	
4-Chlorophenyl phenyl ether	"	86.2		10.0	"	"		"	86.2%	(25-158)			"	
Chrysene	"	88.4		10.0	"	"		"	88.4%	(25-168)			"	
Di-n-butyl phthalate	"	86.1		10.0	"	"		"	86.1%	(25-118)			"	
Dibenz (a,h) anthracene	"	81.3		10.0	"	"		"	81.3%	(25-227)			"	
1,2-Dichlorobenzene	"	68.6		10.0	"	"		"	68.6%	(32-129)			"	
1,3-Dichlorobenzene	"	61.4		10.0	"	"		"	61.4%	(25-172)			"	
1,4-Dichlorobenzene	"	62.6		10.0	"	"		"	62.6%	(20-124)			"	
3,3'-Dichlorobenzidine	"	80.3		20.0	"	"		"	80.3%	(25-262)			"	
2,4-Dichlorophenol	"	83.8		10.0	"	"		"	83.8%	(39-135)			"	
Diethyl phthalate	"	85.6		10.0	"	"		"	85.6%	(25-114)			"	
2,4-Dimethylphenol	"	80.2		10.0	"	"		"	80.2%	(32-119)			"	
Dimethyl phthalate	"	87.5		10.0	"	"		"	87.5%	(25-112)			"	
4,6-Dinitro-2-methylphenol	"	113		10.0	"	"		"	113%	(25-181)			"	
2,4-Dinitrophenol	•	113		20.0	"	"		"	113%	(25-191)			"	
2,4-Dinitrotoluene	"	88.7		10.0	"	"		"	88.7%	(39-139)			"	
2,6-Dinitrotoluene	"	88.5		10.0	"			"	88.5%				"	
										` ′				
Fluoranthene	"	92.3		10.0	"	"		"	92.3%	(26-137)			"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager







Shell Terminal - 2555 13th SW, Seattle, WA **PES Environmental** Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D20023	Water	Preparation	Method: EP	A 3520C	!									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	e % REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (7D20023-BS1)	_							Ext	racted:	04/20/07 11	:38			
Hexachlorobenzene	EPA 625	88.7		10.0	ug/l	1x		100	88.7%	(25-152)			04/24/07 19:57	
Hexachlorobutadiene	"	74.3		10.0	"	"		"	74.3%	(25-116)			"	
Hexachloroethane	"	56.2		10.0	"	"		"	56.2%	(40-113)			"	
Indeno (1,2,3-cd) pyrene	"	79.5		10.0	"	"		"	79.5%	(25-171)			"	
Isophorone	"	91.1		10.0	"	"		"	91.1%	(25-196)			"	
Naphthalene	"	74.8		10.0	"	"		"	74.8%	(25-133)			"	
Nitrobenzene	"	80.6		10.0	"	"		"	80.6%	(35-180)			"	
2-Nitrophenol	"	84.5		10.0	"	"		"	84.5%	(29-182)			"	
4-Nitrophenol	"	94.5		10.0	"	"		"	94.5%	(25-132)			"	
N-Nitrosodimethylamine	"	84.2		20.0	"	"		"	84.2%	(25-150)			"	
N-Nitrosodi-n-propylamine	"	92.0		10.0	"	"		"	92.0%	(25-230)			"	
Di-n-octyl phthalate	"	91.4		10.0	"			"	91.4%	(25-146)			"	
Pentachlorophenol	,,	119		10.0	"	"		"	119%	(25-176)			"	
Phenanthrene	,,	86.8		10.0	"	,,		"	86.8%	(54-120)			,,	
Phenol	,,	84.9		10.0	"			,,	84.9%	(25-112)			"	
Pyrene	"	91.2		10.0	"	,,		,,	91.2%	(52-115)			"	
1,2,4-Trichlorobenzene	"	72.9		10.0	"	,,		,,	72.9%	(44-142)			"	
			86.2%		nits: 49-122%	. "				()			04/24/07 19:57	7
Surrogate(s): 2-FBP 2-FP		Recovery:	79.5%	Lin	nus. 49-122% 20-1119								"	
Nitrobenzene-d5			83.8%		50-1209								"	
Phenol-d6			85.5%		12-1209								"	
p-Terphenyl-d14			90.8%		10-1389	6 "							"	
2,4,6-TBP			94.7%		22-1319	6 "							"	
LCS Dup (7D20023-BSD1)								Ext	racted:	04/20/07 11	:38			
Acenaphthene	EPA 625	93.1		10.0	ug/l	1x		100	93.1%	(47-145)	4.62%	6 (30)	04/24/07 20:30	
Acenaphthylene	,,	89.3		10.0	"			,,	89.3%	(33-145)	4.58%		,,	
Anthracene	,,	92.6		10.0	"	.,		,,	92.6%	(27-133)	4.87%		"	
1,2-Diphenylhydrazine (as Azobenzene)	,,	88.2		20.0	"	.,		,,	88.2%	(25-150)	2.06%		"	
Benzo (a) anthracene	"	88.6		10.0	"			,,	88.6%	(33-143)	0.1139		,,	
Benzo (a) pyrene	,,	90.3		10.0	,,	.,		,,	90.3%	(25-163)	1.79%		,,	
Benzo (a) pyrene Benzo (b) fluoranthene	,,	90.3 81.7		10.0	"			,,	81.7%	(25-165)	3.36%		"	
Benzo (k) fluoranthene	,,	96.3		10.0	,,	.,		,,	96.3%	(25-162)	1.44%		,,	
					,,			,,		` ′			,,	
Benzo (ghi) perylene	,,	76.6		10.0					76.6%	(25-219)	4.95%			
Bis(2-chloroethoxy)methane	,,	89.2		10.0				"	89.2%	(33-184)	4.59%			
Bis(2-chloroethyl)ether	"	86.3		10.0				"	86.3%	(25-158)	6.34%			
Bis(2-chloroisopropyl)ether	"	77.1		10.0	"	"			77.1%	(36-166)	6.84%		"	
Bis(2-ethylhexyl)phthalate	"	87.5		50.0	"	"		"	87.5%	(25-158)	0.00%		"	
4-Bromophenyl phenyl ether	"	80.8		10.0	"	"		"	80.8%	(53-127)	3.14%		"	
Butyl benzyl phthalate	"	90.5		10.0	"	"		"	90.5%	(25-152)	0.4419	% "	"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D20023	Water	Preparation M	lethod: EP	A 3520C										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	« REC	(Limits)	% RPD	(Limit	s) Analyzed	Notes
LCS Dup (7D20023-BSD1)								Ext	racted:	04/20/07 11	:38			
2-Chloronaphthalene	EPA 625	73.2		10.0	ug/l	1x		100	73.2%	(60-118)	4.47%	(30)	04/24/07 20:30	
2-Chlorophenol	"	94.6		10.0	"			"	94.6%	(25-134)	8.03%	"	"	
4-Chlorophenyl phenyl ether	"	89.8		10.0	"			"	89.8%	(25-158)	4.09%	"	"	
Chrysene	"	90.4		10.0	"			"	90.4%	(25-168)	2.24%	"	"	
Di-n-butyl phthalate	"	88.7		10.0	"			"	88.7%	(25-118)	2.97%	"	"	
Dibenz (a,h) anthracene	"	85.9		10.0	"			"	85.9%	(25-227)	5.50%	"	"	
1,2-Dichlorobenzene	"	78.3		10.0	"			"	78.3%	(32-129)	13.2%	"	"	
1,3-Dichlorobenzene	"	71.6		10.0	"			"	71.6%	(25-172)	15.3%	"	"	
1,4-Dichlorobenzene	"	71.6		10.0	"			"	71.6%	(20-124)	13.4%	"	"	
3,3'-Dichlorobenzidine	"	87.8		20.0	"			"	87.8%	(25-262)	8.92%	"	"	
2,4-Dichlorophenol	"	88.1		10.0	"			"	88.1%	(39-135)	5.00%	"	"	
Diethyl phthalate	"	88.8		10.0	"			"	88.8%	(25-114)	3.67%	"	"	
2,4-Dimethylphenol	"	81.5		10.0	"			"	81.5%	(32-119)	1.61%	"	"	
Dimethyl phthalate	"	89.7		10.0	"			"	89.7%	(25-112)	2.48%	"	"	
4,6-Dinitro-2-methylphenol		119		10.0	"			"	119%	(25-181)	5.17%	"	"	
2,4-Dinitrophenol		119		20.0	"			"	119%	(25-191)	5.17%	"	"	
2,4-Dinitrotoluene		93.1		10.0	"			"	93.1%	(39-139)	4.84%	"	"	
2,6-Dinitrotoluene	"	91.1		10.0	"			"	91.1%	(50-158)	2.90%	"	"	
Fluoranthene	"	96.3		10.0	"			"	96.3%	(26-137)	4.24%	"	"	
Fluorene	"	89.7		10.0	"			"	89.7%	(59-121)	4.79%	"	"	
Hexachlorobenzene	"	92.5		10.0	"			"	92.5%	(25-152)	4.19%	"	"	
Hexachlorobutadiene		81.6		10.0	"			"	81.6%	(25-116)	9.36%	"	"	
Hexachloroethane		66.8		10.0	"	"		"	66.8%	(40-113)	17.2%	"	"	
Indeno (1,2,3-cd) pyrene		85.1		10.0	"	"		"	85.1%	(25-171)	6.80%	"	"	
Isophorone		94.6		10.0	"	"		"	94.6%	(25-196)	3.77%	"	"	
Naphthalene	"	79.3		10.0	"	"		"	79.3%	(25-133)	5.84%	"	"	
Nitrobenzene		83.5		10.0	"	"		"	83.5%	(35-180)	3.53%	"	"	
2-Nitrophenol		88.8		10.0	"	"		"	88.8%	(29-182)	4.96%	"	"	
4-Nitrophenol	"	96.0		10.0	"	"		"	96.0%	(25-132)	1.57%	"	"	
N-Nitrosodimethylamine	"	88.1		20.0	"	"		"	88.1%	(25-150)	4.53%	"	"	
N-Nitrosodi-n-propylamine	"	98.2		10.0	"	"		"	98.2%	(25-230)	6.52%	"	"	
Di-n-octyl phthalate	"	91.2		10.0	"	"		"	91.2%	(25-146)	0.219%	, "	"	
Pentachlorophenol		124		10.0	"	"		"	124%	(25-176)	4.12%		"	
Phenanthrene		89.5		10.0	"	"		"	89.5%	(54-120)	3.06%	"	"	
Phenol		91.0		10.0	"	"		"	91.0%	(25-112)	6.94%	"	"	
Pyrene	"	90.1		10.0	"	"		"	90.1%	(52-115)	1.21%	"	"	
1,2,4-Trichlorobenzene	"	78.5		10.0	"	"		"	78.5%	(44-142)	7.40%	"	"	
Surrogate(s): 2-FBP 2-FP			9.2%	Lin	nits: 49-122% 20-111					· · · · ·			04/24/07 20:30)

TestAmerica - Seattle, WA

Jandra Jakameurch

Sandra Yakamavich, Project Manager





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PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Acid and Base/Neutral Extractables by EPA Method 625 - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D20023 Water Preparation Method: EPA 3520C

Analyte Method Result MDL* MRL Units Dil Source Spike % (Limits) % (Limits) Analyzed Notes

LCS Dup (7D20023-BSD1) Extracted: 04/20/07 11:38

 Surrogate(s):
 Nitrobenzene-d5
 Recovery:
 86.0%
 Limits:
 50-120%
 1x

 Phenol-d6
 92.7%
 12-120%
 "

 p-Terphenyl-d14
 90.6%
 10-138%
 "

 2,4,6-TBP
 98.0%
 22-131%
 "

"

04/24/07 20:30

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager



Test/America

PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Conventional Chemistry Parameters by APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7D16057	Water P	reparation M	lethod: Ge	eneral Pro	paration			
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike % (Limits) % (Limits) Analyzed Notes
Blank (7D16057-BLK1)								Extracted: 04/16/07 15:23
Total Suspended Solids	EPA 160.2	ND		4.0	mg/l	1x		04/17/07 15:23
Duplicate (7D16057-DUP1)				QC Source:	BQD0232-	01		Extracted: 04/16/07 15:23
Total Suspended Solids	EPA 160.2	ND		4.0	mg/l	1x	ND	18.2% (25) 04/17/07 15:23

QC Batch: 7D18040	Water P	reparation M	lethod: Gi	ravimetri	c (hexane	e)								
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	e % REC	(Limits)	% RPD	(Limit	s) Analyzed	Notes
Blank (7D18040-BLK1)								Ext	racted:	04/18/07 13	:44			
Oil & Grease (HEM)	EPA 1664A	ND		5.00	mg/l	1x							04/23/07 10:57	
Total Petroleum Hydrocarbons (SGT-HEM)	"	ND		5.00	"	"				-			"	
LCS (7D18040-BS1)								Ext	racted:	04/18/07 13	i:44			
Oil & Grease (HEM)	EPA 1664A	38.1		5.00	mg/l	1x		40.0	95.2%	(78-114)			04/23/07 10:57	
Total Petroleum Hydrocarbons (SGT-HEM)	"	16.9		5.00	"	"		20.0	84.5%	(64-132)			"	
Matrix Spike (7D18040-MS1)				QC Source:	BQD0232	-01		Ext	racted:	04/18/07 13	:44			
Oil & Grease (HEM)	EPA 1664A	38.2		5.10	mg/l	1x	0.710	40.8	91.9%	(78-114)			04/23/07 10:57	
Total Petroleum Hydrocarbons (SGT-HEM)	"	16.3		5.10	"	"	ND	20.4	79.9%	(64-132)			"	
Matrix Spike Dup (7D18040-M	MSD1)			QC Source:	BQD0232	-01		Ext	racted:	04/18/07 13	i:44			
Oil & Grease (HEM)	EPA 1664A	36.2		5.10	mg/l	1x	0.710	40.8	87.0%	(78-114)	5.38%	6 (18)	04/23/07 10:57	
Total Petroleum Hydrocarbons (SGT-HEM)	"	15.1		5.10	"	"	ND	20.4	74.0%	(64-132)	7.64%	% (34)	"	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager







PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Conventional Chemistry Parameters by APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica - Seattle, WA

			103	tAmerica -	beattle,	11 1 1							
QC Batch: 7D26021	Water P	Preparation M	ethod: G	eneral Pre	paration	1							
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike % Amt REC	(Limits)	% RPD	(Limits) Analyzed	Notes
Blank (7D26021-BLK1)								Extracted:	04/25/07 11:	:04			
Cyanide (total)	EPA 335.2 Mod	ND		0.0100	mg/l	1x						04/26/07 13:03	
LCS (7D26021-BS1)								Extracted:	04/25/07 11:	:04			
Cyanide (total)	EPA 335.2 Mod	0.0830		0.0100	mg/l	1x		0.0899 92.3%	(85-115)			04/26/07 13:03	
Duplicate (7D26021-DUP1)				QC Source:	BQD0275	-01		Extracted:	04/25/07 11:	:04			
Cyanide (total)	EPA 335.2 Mod	ND		0.0100	mg/l	lx	ND			NR	(27)	04/26/07 13:03	
Duplicate (7D26021-DUP2)				QC Source:	BQD0309	-01		Extracted:	04/25/07 11:	:04			
Cyanide (total)	EPA 335.2 Mod	ND		0.0100	mg/l	lx	ND			NR	(27)	04/26/07 13:03	
Matrix Spike (7D26021-MS1)				QC Source:	BQD0275	-01		Extracted:	04/25/07 11:	:04			
Cyanide (total)	EPA 335.2 Mod	0.0740		0.0100	mg/l	1x	ND	0.0899 82.3%	(53-128)			04/26/07 13:03	
Matrix Spike (7D26021-MS2)				QC Source:	BQD0309	-01		Extracted:	04/25/07 11:	:04			
Cyanide (total)	EPA 335.2 Mod	0.0830		0.0100	mg/l	1x	ND	0.0899 92.3%	(53-128)			04/26/07 13:03	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





Shell Terminal - 2555 13th SW, Seattle, WA **PES Environmental** Project Name:

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created: 05/03/07 15:54 Bellevue, WA/USA 98005 Project Manager: Bill Haldeman

Mercury by EPA Method 1631E - Laboratory Quality Control Results

QC Batch: 7041121	Water D	nonavation M	othod: E	DA 1621										
QC Batch: 7041121	water r	reparation M	etiloa: E	FA 1031										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7041121-BLK1)								Extra	acted:	04/25/07 16	:07			
Mercury	EPA 1631E	ND		0.00500	ug/l	1x					-	(04/26/07 11:20	
LCS (7041121-BS1)								Extra	acted:	04/25/07 16	:07			
Mercury	EPA 1631E	0.0505		0.00500	ug/l	1x		0.0500	101%	(85-115)		(04/26/07 11:23	
LCS Dup (7041121-BSD1)								Extra	ected:	04/25/07 16	:07			
Mercury	EPA 1631E	0.0488		0.00500	ug/l	1x		0.0500	97.6%	(85-115)	3.42%	(20)	04/26/07 11:26	
Duplicate (7041121-DUP1)				QC Source:	PQD0753	-02		Extra	acted:	04/25/07 16	:07			
Mercury	EPA 1631E	ND		0.00500	ug/l	1x	ND				NR	(20)	04/26/07 11:29	
Matrix Spike (7041121-MS1)				QC Source:	PQD0753	-02		Extra	ected:	04/25/07 16	:07			
Mercury	EPA 1631E	0.0481		0.00500	ug/l	1x	ND	0.0500	96.2%	(71-125)		(04/26/07 11:32	
Matrix Spike Dup (7041121-MS	D1)			QC Source:	PQD0753	-02		Extra	acted:	04/25/07 16	:07			
Mercury	EPA 1631E	0.0473		0.00500	ug/l	1x	ND	0.0500	94.6%	(71-125)	1.68%	(20)	04/26/07 11:35	

QC Batch: 7041179	Water P	reparation M	lethod: E	PA 1631									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike % Amt REC	(Limits)	% RPD	(Limits) Analyzed	Notes
Blank (7041179-BLK1)								Extracted:	04/26/07 1	6:27			
Mercury	EPA 1631E	ND		0.00500	ug/l	1x						04/27/07 09:30	
LCS (7041179-BS1)								Extracted:	04/26/07 1	6:27			
Mercury	EPA 1631E	0.0514		0.00500	ug/l	1x		0.0500 103%	(85-115)			04/27/07 09:32	
LCS Dup (7041179-BSD1)								Extracted:	04/26/07 1	6:27			
Mercury	EPA 1631E	0.0488		0.00500	ug/l	1x		0.0500 97.6%	(85-115)	5.19%	(20)	04/27/07 09:36	
Duplicate (7041179-DUP1)				QC Source:	PQD0970	-02		Extracted:	04/26/07 1	6:27			
Mercury	EPA 1631E	ND		0.00500	ug/l	1x	ND			73.4%	(20)	04/27/07 09:39	R4
Duplicate (7041179-DUP2)				QC Source:	BQD0232	-01		Extracted:	04/26/07 1	6:27			
Mercury	EPA 1631E	ND		0.00500	ug/l	1x	ND			23.9%	(20)	04/27/07 10:49	R4
Duplicate (7041179-DUP3)				QC Source:	BQD0232	-03		Extracted:	04/26/07 1	6:27			
Mercury	EPA 1631E	ND		0.00500	ug/l	1x	ND			1.48%	(20)	04/27/07 10:54	

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





Test/merica

PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Mercury by EPA Method 1631E - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 7041179	Water P	reparation M	ethod: E	PA 1631				
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike % (Limits) % (Limits) Analyzed Notes
Matrix Spike (7041179-MS1)				QC Source:	PQD0970-	02		Extracted: 04/26/07 16:27
Mercury	EPA 1631E	0.0497		0.00500	ug/l	1x	0.00216	0.0500 95.1% (71-125) 04/27/07 09:41
Matrix Spike (7041179-MS2)				QC Source:	PQD0970-	11		Extracted: 04/26/07 16:27
Mercury	EPA 1631E	0.0469		0.00500	ug/l	1x	0.00183	0.0500 90.1% (71-125) 04/27/07 09:48
Matrix Spike Dup (7041179-M	SD1)			QC Source:	PQD0970-	02		Extracted: 04/26/07 16:27
Mercury	EPA 1631E	0.0500		0.00500	ug/l	1x	0.00216	0.0500 95.7% (71-125) 0.602% (20) 04/27/07 09:45
Matrix Spike Dup (7041179-M	SD2)			QC Source:	PQD0970-	11		Extracted: 04/26/07 16:27
Mercury	EPA 1631E	0.0486		0.00500	ug/l	1x	0.00183	0.0500 93.5% (71-125) 3.56% (20) 04/27/07 09:51

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager





Test/America

PES Environmental Project Name: Shell Terminal - 2555 13th SW, Seattle, WA

9 Lake Bellevue Dr Ste 108 Project Number: SAP 357032, RIPR 57904 Report Created:
Bellevue, WA/USA 98005 Project Manager: Bill Haldeman 05/03/07 15:54

Notes and Definitions

Report Specific Notes:

H4 - Sample was extracted past holding time, but analyzed within analysis holding time.

R10 - The RPD between the primary and confirmatory analysis exceeded 40%. Per method 8000B, the lower value was reported due to apparent chromatographic problems.

R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B.
 *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data

Reporting - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*.

Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Seattle, WA

Sandra Yakamavich, Project Manager



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